

SHORT COMMUNICATION

***Rorippa dictyosperma* and *R. cygnorum* have mucous seeds**

In her description of *Rorippa dictyosperma* (Hook.) L.A.S. Johnson, Hewson (1982) describes the seeds as not mucous, and includes this in the key to help discriminate *R. dictyosperma* from the (mucous) *R. gigantea* (J.D. Hook.) Garnock-Jones. Keighery (2008), in segregating Western Australian populations previously referred to *R. dictyosperma* as *R. cygnorum* Keighery, similarly describes the seeds of the latter species as non-mucous ('not mucilaginous when wet', *l.c.* p. 80). Hooker (1834) makes no mention of this feature in the protologue of *Cardamine dictyosperma* Hook., nor does Johnson (1962) when transferring the species to *Rorippa* Scop.

While collecting seeds of *R. cygnorum*¹ for the Western Australian Department of Parks and Wildlife's Threatened Flora Seed Centre, one of us (KRT) noted that fresh seeds shed from mature, dehisced pods were clearly mucous and sticky to the touch. Freshly dried seeds likewise quickly developed a mucous layer on wetting. Upon checking specimens held at PERTH and MEL, we found that wetted seeds of both *R. dictyosperma* and *R. cygnorum* are consistently mucous. Mature dried seeds are initially hydrophobic; a drop of detergent immediately wets the seed and the mucilage layer soon develops. Without detergent, seeds took 3–5 minutes to wet and produce the mucilage layer. Any seeds that were not quite ripe or were damaged failed to produce a noticeable mucilage layer.

Seeds from collections before 1952 (e.g. *Willis s.n.*) failed to produce mucilage or produced only scant mucilage. It is possible that Hewson, in testing this feature, used old, immature or damaged seeds of *R. dictyosperma*. An alternative possibility, that she erroneously transposed these states in her key at the couplet that separates *R. dictyosperma* from *R. gigantea*, was rejected by confirming that seeds of *R. gigantea* at MEL are also mucous.

Given that *R. dictyosperma* and *R. cygnorum* are both clearly mucous, this feature cannot be used to discriminate either species from related, non-mucous taxa in the genus; keys to species which use this feature (e.g. Hewson 1982; Entwisle 1996) should be amended to remove it.

Specimens examined. *Rorippa cygnorum*. WESTERN AUSTRALIA: [localities withheld for conservation reasons]: 29 Nov. 1990, *A.R. Annels* 1399 (PERTH); 30 Nov. 1994, *A.R. Annels* 5066 (PERTH); *s. dat.*, *R.J. Cranfield* 23471 (PERTH); 24 Dec. 2008, *J. Liddel* 61 (PERTH). *Rorippa dictyosperma*. VICTORIA²: Ellery Forest Block, Green Road, 12 Jan. 1987, *G.E. Earl* 342 (MEL); Mount Buffalo, 8 Apr. 1986, *A.D.J. Piesse* 170 (MEL); Marysville State Forest, Robertson Track, 20 Apr. 2008, *V. Stajsic* 4508 & *N. Klazenga* (MEL, NSW); N of Walhalla, 24 May 1991, *O. Thompson* 165 (MEL); Mount Buffalo National Park, 4 Mar. 2008, *N.G. Walsh* 6795 (MEL); Wilsons Promontory, Vereker Range, 23 Dec. 1951, *J.H. Willis s.n.* (MEL). *Rorippa gigantea*. VICTORIA²: Pheasant Creek Track, W of Bullumwaa–[Mount] Baldhead Road, 18 Mar. 1971, *A.C. Beauglehole* 37466 (MEL);

¹Listed by Smith (2013) as Priority Two under Department of Parks and Wildlife Conservation Codes for Western Australian Flora.

²Specimens of *R. dictyosperma* and *R. gigantea* from elsewhere in the range of the species (i.e. Queensland, New South Wales and South Australia) were not assessed, but we assume that both species are consistently mucous throughout their ranges.

Ferntree Falls, [Mount] Buangor State Park, *s.d.*, *I.R. Thompson* 597 (MEL). TASMANIA: Flinders Island, 19 Feb. 2004, *J.S. Whinray* 11992 (MEL).

Acknowledgements

We thank Greg Keighery for discussions on the mucosity of seeds in *Rorippa*, Nicholas Lander for useful editorial comments on the manuscript, and thoughtful collectors who gather fruiting as well as flowering specimens.

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